



Dr. Haibo Zhou

Education:

Ph.D., Dec. 1992, [University of Washington](#).

My statistical methodological research interests include survival analysis, biased sampling, inference of missing data, risk analysis, statistical methods in epidemiology and environmental statistics. Most of these research areas are natural extensions of the statistical problems arising from my collaboration with other scientists.

I collaborated with Dr Matthew Longnecker (Epidemiology) to design an environmental epidemiologic study on evaluating the in utero exposure to the polychlorinated biphenyls (PCBs) in relation to various outcomes that included male birth defects, age at menarche, and neurodevelopmental abnormalities etc., among children born in the Collaborative Perinatal Project. The study design is an outcome dependent sampling design aimed at enhancing the efficiency while reducing the overall cost of the study. This project is currently in the data analysis stage and statistical methods are being developed as needed. Another of my research interests is the statistical modeling of reproductive epidemiologic studies and assessing effects of environmental toxic exposures on human fertility. I am also currently involved with the vitro fertilization (IVF) study in the Institute. A statistical method has been worked out to evaluate the effects of a whole array of exposure variables on conception.

I am also working with Dr. Stephanie London (Epidemiology) in a recent study that studies the gene-environmental interaction and childhood respiratory health in Wuhan, China for the 7th graders.

Selected Publications:

Zhou, H. and Pepe, M.S (1995): "Auxiliary covariate data in failure time regression". {Biometrika} 83, 139-149.

Zhou, H. and Weinberg, C. R. (1996): "Modeling conception as an aggregated Bernoulli outcome with latent variables, via the EM algorithm". {Biometrics} 52, 945-954.

Zhou, H., Weinberg, C.R., Wilcox, A. J. and Baird, D. B. (1996): "A Random Effects Model for Cycle Viability in Fertility Studies ". {Journal of American Statistical Association} 91, 1413-1422.

Zhou, H. and Weinberg, C.R. (1998): "Evaluating uterine receptivity and embryo viability for couples undergoing {in vitro} fertilization". {Statistics in Medicine} 17, 1601-1602.

Zhou, H. and Weinberg, C. R. (1999): "A semi-parametric mixture model for time to conception data". {Journal of Statistical Planning and Inference} 75, 453-462.

Zhou, H. and Weinberg, C. R. (1999): "Potential for bias in estimating human fecundability parameters: a comparison of statistical models". {Statistics in Medicine} 18, 411-422.

Related Links:

[University of Washington](#)

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